

December 29, 2000

MEMORANDUM

TO: Orville Green, Administrator
State Air Quality Program

FROM: Dan Pittman, P.E., Staff Engineer
Civil/Environmental Engineering
Technical Services Program Office

THROUGH: Daniel Salgado, Lead Process Engineering
State Technical Services Office

SUBJECT: T1-9712-165-1 Technical Analysis for a Tier I Operating Permit
GEA Integrated Cooling Technologies, Inc.

PERMITTEE:	GEA Integrated Cooling Technologies, Inc. 13725 West Highway 53 Rathdrum, Idaho 83858
PERMIT NO:	055-00035
STANDARD INDUSTRIAL CLASSIFICATION	3079
DESCRIPTION:	Fiberglass Reinforced Plastic
KIND OF PRODUCTS:	Pipe and miscellaneous Parts
RESPONSIBLE OFFICIAL:	Larry Williams
PERSON TO CONTACT:	Wade B. Wolcott, Division Manager
TELEPHONE NO:	(208) 773-1787
# OF FULL-TIME EMPLOYEES:	34
AREA OF OPERATION:	10 acres
FACILITY CLASSIFICATION:	A
COUNTY:	Kootenai
AIR QUALITY CONTROL REGION:	062
UTM COORDINATES:	502.1, 5290.5
EXACT PLANT LOCATION:	N ½ of SW 1/4 of NW 1/4 of Section 16, T 51N, R 5W

TABLE OF CONTENTS

LIST OF ACRONYMS	iv
1. PURPOSE	1
2. SUMMARY OF EVENTS	1
3. BASIS OF THE ANALYSIS	1
4. REGULATORY ANALYSIS - GENERAL FACILITY	1
4.1 Facility Description	1
4.1.1 General Process Description	1
4.1.2 Facility Classification	2
4.1.3 Area Classification	2
4.1.4 Permitting History	2
4.2 Facility-Wide Applicable Requirements	2
4.2.1 Emission Description	2
4.2.2 Combustion Source	3
4.2.3 Fugitive Sources	3
4.2.4 Insignificant Activities	4
4.2.5 Fugitive Particulate Matter	4
4.2.6 Control of Odors	5
4.2.7 Visible Emissions	5
4.2.8 Startup, Shutdown, Scheduled Maintenance, Safety Measures, Upset and Breakdown	6
4.2.9 Chemical Accident Prevention Provisions	6
4.2.10 Process Weight Rate Limit on Fiberglass Reinforced Plastic Process	7
4.3 Applicable Requirements From Permit to Construct	7
4.3.1 Styrene Emission Limits	7
4.3.2 Volatile Organic Compound Emission Limit	7
4.3.3 Particulate Matter Emissions	7
4.3.4	7
4.4 Operating Requirements From Permit to Construct	7
4.5 Monitoring	8
4.5.1 Fuel Burning Equipment	9
4.5.2 Fugitive Dust	9
4.5.3 Visible Emissions	9
4.5.4 Odors	9
4.5.5 Styrene	9
4.5.6 VOC	10
4.5.7 PM and PM-10	10
4.6 Recordkeeping	10
4.7 Reporting	11
4.8 Difference in Applicable Requirements from Original Form	11
5. ALTERNATIVE OPERATING SCENARIOS	11
6. TRADING SCENARIOS	11
7. EXCESS EMISSIONS	11
8. INSIGNIFICANT ACTIVITIES	12
9. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION	12
9.1 Compliance Plan	12
9.2 Compliance Certification	12
9.3 Compliance Inspection	12
10. REGISTRATION FEES	12
11. RECOMMENDATION	12
APPENDIX A	13

LIST OF ACRONYMS

ACFM	Actual Cubic Feet per Minute
AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DEQ	Idaho Department of Environmental Quality
dscf	Dry Standard Cubic Feet
EF	Emission Factor
EPA	United States Environmental Protection Agency
gpm	Gallons per Minute
gr	Grain (1 lb = 7000 Grains)
HAPs	Hazardous Air Pollutants
IC	Integrated Chip
IDAPA	Idaho Administrative Procedures Act
km	Kilometer
lb/hr	Pound per Hour
MMBTU	Million British Thermal Unit
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
O ₃	Ozone
PM	Particulate Matter
PM ₁₀	Particulate Matter with an Aerodynamic Diameter of 10 Micrometer (μm) or Less
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTC	Permit to Construct
SCC	Source Classification Code
scf	Standard Cubic Foot
SO ₂	Sulfur Dioxide
TSP	Total Suspended Particulates
T/yr	Tons per Year (1 Ton = 2000 lb)
μm	Micrometers
VE	Visible Emissions
VOC	Volatile Organic Compound

1. PURPOSE

The purpose of this memorandum is to set out the legal and factual basis for this draft Tier I Operating Permit (OP) in accordance with IDAPA 58.01.01.362, *Rules for the Control of Air Pollution in Idaho*.

The Idaho Department of Environmental Quality (DEQ) staff has reviewed the information provided by GEA Integrated Cooling Technologies, Inc. (GEA) regarding the operation of their facility near Rathdrum, Idaho. This information was submitted based on the requirements of the Tier I OP, in accordance with Section 16.01.01.300 of the *Rules*.

2. SUMMARY OF EVENTS

On December 26, 1997, DEQ received the Tier I OP application from GEA for their Rathdrum facility. The application was prepared by Bison Engineering, Inc., the facility's consulting firm. The application was determined to be complete on October 8, 1999.

A public comment period was held from March 15, 2000 through April 14, 2000. The U.S. Environmental Protection Agency reviewed this permit from October 10, 2000 through November 24, 2000.

3. BASIS OF THE ANALYSIS

The following documents were relied upon in preparing this memorandum and the Tier I OP:

- a. Tier I Air Operating Permit Application, (received December 26, 1997, GEA; Rathdrum, Idaho; prepared by Bison Engineering, Inc.); and supplemental application materials received September 25, 1998, January 21, 1999, March 30, 1999, and February 14, 2000.
- b. Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, January 1995, Office of Air Quality Planning and Standards, United States Environmental Protection Agency;
- c. Guidance developed by EPA and DEQ;
- d. Title V Permits issued by other jurisdictions; and
- e. Documents and procedures developed in the Title V Pilot Operating Permit Program.

4. REGULATORY ANALYSIS - GENERAL FACILITY

4.1 Facility Description

4.1.1 General Process Description

GEA manufactures fiberglass reinforced plastic (FRP) panel segments, which function as fan shrouds, FRP pipe for water distribution systems for cooling towers, and custom FRP products. GEA also has a woodworking process where lumber is cut, drilled, and shipped for on-site construction of cooling tower frameworks.

GEA produces large diameter FRP cooling tower pipe and corrosive-resistant pipe liners in addition to the FRP panel segments. Lumber is also brought to the facility where it is cut to size, drilled, and shipped for on-site construction of the cooling tower framework. The woodworking process is totally enclosed within the wood fabrication shop, and the process does not produce any quantifiable air emissions.

Raw materials used in the production of the FRP products include gelcoat, catalyst (methyl ethyl ketone peroxide), fiberglass roving, and polyester resins containing styrene. A soap-based product and acetone are the solvents used to clean guns, tools, and purge lines.

Three production methods are used by GEA in the FRP manufacturing process. Spray-up and hand lay-up methods are used in the production of panels and molds, whereas filament winding is used to manufacture pipes and pip liners. Low monomer content resins are warmed to about 80 degree Fahrenheit to achieve workable resin viscosities. These lower viscosities are needed to facilitate spray-up and filament winding methods.

The first step in panel construction is to make a reusable mold. Once cured, the mold is sprayed with gelcoat. Resin, chopped fiberglass roving, and catalyst are then applied with a chop gun. Airless spray gun equipment is used for all spray-up operations. Several layers of the resin/fiberglass/catalyst mixture are required to produce the final product. Hand lay-up methods are used where spray-up is not practical.

In the filament winding process, continuous strand rovings are pulled by a rotating mandrel through a strand tensioning device, and sprayed with a resin/catalyst mixture or run through a resin bath. The coated fiberglass rovings are wound onto a specifically-sized mandrel to form the desired pipe dimensions. After the pipes have cured, the edges are ground and pipe sections are bonded together to form the desired length.

The fiber glassing building is sectioned off into a spray area and an assembly area. Resins, gelcoat, catalyst, and solvent are stored in a secondary concrete containment area, under a canopy attached to the fiberglass building. During spraying operations, the building is flooded with fresh air in order to meet the Occupational Safety and Health Administration (OSHA) workplace standards for styrene. The air flow is accomplished via exhaust fans mounted in two (2) wall vents, located just above floor level in the spray booth and pipe winding areas. A separate stack is used for each of the two vents, and a gas heater warms the make-up air. Emission from the spray up areas (stack No. 1 & 2) area primarily vapors, the fiber glass "chop" guns provide for an very small amount of particulate.

4.1.2 Facility Classification

The facility is classified as major, in accordance with IDAPA 58.01.01.008.10, for Tier I permitting purposes because the facility has the potential to emit styrene at 54.4 tons per year. However, there is not a source-specific MACT requirement promulgated for this source category. The facility is not major as defined at IDAPA 58.01.01.006.55; and is, therefore, not subject to Prevention of Significant Deterioration permitting requirements.

4.1.3 Area Classification

The facility's located within Air Quality Control Region 62 and is located in Kootenai County, which is classified as attainment or unclassifiable for all federal and state criteria air pollutants (i.e., SO₂, NO_x, CO, PM₁₀, ozone, fluorides, and lead). There are no Class I areas within ten (10) kilometers (km) of the facility.

4.1.4 Permitting History

GEA was issued a Permit to Construct on January 30, 1990.

The Permit was modified on February 5, 1993 and on August 25, 1994.

4.2 Facility-Wide Applicable Requirements

4.2.1 Emission Description

The emissions from the GEA fiberglass reinforced plastic manufacturing process (FRP Building) are largely gaseous emission in the form of volatile organic compounds. In addition, there are small amounts of particulates emissions from the fiberglass lay up process and from natural gas combustion. The facility provided emission estimates in its application. These emission estimates were reviewed and accepted. The principal pollutant of concern is styrene. A summary of the point

source emissions is presented in Table 1. PM-10 emissions from Stacks #1 and #2 are specifically regulated by the existing Permit to Construct. Visible emission are expected to be present from #1 and #2 and though the Operating Permit has Facility Wide Conditions to demonstrate continuous compliance with the opacity limit. This provision is A.8.

The hazardous air pollutant (HAP) emanating from the facility in major quantities is styrene. No other hazardous air pollutants are known, suspected, or are reported to (be) emitted in major quantities. Total HAPs are well above 10 tons per year of styrene, so the facility is a major source of HAPs.

TABLE 1

ESTIMATED POINT SOURCE MAXIMUM EMISSIONS FROM GEA	
POLLUTANT	EMISSION RATES (T/YR)
PM & PM ₁₀	5.9
CO	0.38
VOC	1.69
NO _x	1.8
Styrene	54.4
TOTAL	64.17

Emissions units affected only by generally applicable requirements are discussed below.

4.2.2 Combustion Source

A 4.4 MMBtu/hr Natural Gas-Fired Make-Up Air Heater is used at the facility. The heaters is on the list of presumptively insignificant activities at IDAPA 58.01.01.317.b.i.5. However, the emission unit is regulated by a specific grain-loading emission limitation, therefore, the heater does not qualify as an insignificant activity. The source must comply with the Fuel Burning emission limitations of IDAPA 58.01.01.677 (0.015 gr/dscf, corrected to 3% oxygen).

4.2.3 Fugitive Sources

Lumber is brought to the facility's wood shop where it is cut to size, drilled, and shipped for on-site construction of the cooling tower framework. The woodworking process is totally enclosed within the wood fabrication shop, and the process does not produce and quantifiable air emissions and there is no stack, vent or other functionally equivalent opening to discharge particulate matter to the atmosphere. Any emissions from this building are far less than major thresholds and are considered negligible. Process weight rate limitations of IDAPA 58.01.01.700 are not incorporated into the Permit because emission(s) are much less than one pound per hour. To support this, the Fugitive Dust Control Technology text gives control efficiencies for enclosures of between 70% and 100%, depending on the activity which generates the dust. In this process, control of fugitives from the enclosure would easily be 95% or greater. With this efficiency, the process would have to emit greater than 20 pounds per hour of uncontrolled fugitive dust in order to actually emit one pound per

hour of fugitive dust. This would be equivalent to a sawmill processing 2.85 tons of wood per hour (Fugitive Dust Control Technology, Page 318 "Sawmills"); the wood working operations at GEA are clearly not a significant source of particulate emissions.

4.2.4 Insignificant Activities

6,000 gallon Resin Storage Tank with vapor pressure less than 80 mmHg.

- Insignificant per: IDAPA 58.01.01.317.01.b.3 Operation, loading and unloading of volatile organic compound storage tanks, ten thousand (10,000) gallons capacity or less, with lids or other appropriate closure, vp not greater than eighty (80) mm Hg at twenty-one degrees C. Operation, loading and unloading of gasoline storage tanks, ten thousand (10,000) gallons capacity or less, with lids or other appropriate closure.

1 Propane Tank with 300 gallon capacity.

- Insignificant per: IDAPA 58.01.01.317.01.b.4 Operating, loading and unloading storage of butane, propane, or liquefied petroleum gas (LPG), storage tanks, vessel capacity under forty thousand (40,000) gallons.

Facility-Wide Applicable Requirements

4.2.5 Fugitive Particulate Matter - IDAPA 58.01.01.650-651

4.2.5.(a) Requirement

Facility-wide Condition A.1 states that, all reasonable precautions shall be taken to prevent particulate matter from becoming airborne in accordance with IDAPA 58.01.01.650-651.

4.2.5.(b) Compliance Demonstration

Facility-wide Condition A.2 states that the permittee is required to monitor and record in a log the frequency and the methods used by the facility to reasonably control fugitive particulate emissions. IDAPA 58.01.01.651 gives some examples of ways to reasonably control fugitive emissions which include, use of water or chemicals, application of dust suppressants, use of control equipment, covering of trucks, paving of roads or parking areas, and removal of materials from streets.

Facility-wide Condition A.3 requires that the permittee maintain a log of all fugitive dust complaints received. In addition the permittee is required to take appropriate corrective action as expeditiously as practicable after a valid complaint is received. The permittee is also required to maintain a log which shall include the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken and the date the corrective action was taken.

To ensure that the methods being used by the permittee to reasonably control fugitive particulate matter emissions whether or not a complaint is received, Facility-wide Condition A.4 requires that the permittee conduct periodic inspections of the facility. The permittee is required to inspect potential sources of fugitive emissions during daylight hours and under normal operating conditions. If the permittee determines that the fugitive emissions are not being reasonably controlled the permittee shall take corrective action as expeditiously as practicable. The permittee is also required to maintain a log of the results of each fugitive emission inspection.

Both Facility-wide Conditions A.3 and A.4 require the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid complaint or determining that fugitive particulate emissions are not being reasonably controlled meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.6 Control of Odors - IDAPA 58.01.01.775-776

4.2.6.(a) Requirement

Facility-wide Condition A.5 and IDAPA 58.01.01.776 both state that: *"No person shall allow, suffer, cause or permit the emission of odorous gases, liquids or solids to the atmosphere in such quantities as to cause air pollution."* This condition is currently considered federally enforceable until such time it is removed from the SIP, at which time it will be a state-only enforceable requirement.

4.2.6.(b) Compliance Demonstration

Facility-wide Condition A.6 requires the permittee to maintain a log of all odor complaints received. If the complaint has merit, the permittee is required to take appropriate corrective action as expeditiously as practicable. The log is required to contain the date that each complaint was received and a description of the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Facility-wide Condition A.6 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of receiving a valid odor complaint meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.7 Visible Emissions - IDAPA 58.01.01.625

4.2.7(a) Requirement

IDAPA 58.01.01.625 and Facility-wide Condition A.7 state that *"(No) person shall discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period which is greater than twenty percent (20%) opacity as determined . . ."* by IDAPA 58.01.01.625. This provision does not apply when the presence of uncombined water, nitrogen oxides, and/or chlorine gas are the only reason(s) for the failure of the emission to comply with the requirements of this rule.

4.2.7.(b) Compliance Demonstration

To ensure reasonable compliance with the visible emission rule, Facility-wide Condition A.8 requires that the permittee conduct routine visible emissions inspections of the facility. The permittee is required to inspect potential sources of visible emissions, during daylight hours and under normal operating conditions. If any visible emissions are present from any point of emission covered by this section, the permittee must take appropriate corrective action as expeditiously as practicable. If opacity is determined to be greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period, the permittee must take corrective action and report the exceedance in its annual compliance certification and in accordance with the excess emissions rules in IDAPA

58.01.01.130-136. The permittee is also required to maintain a log of the results of each visible emissions inspection which must include the date of each inspection and a description of the permittee's assessment of the conditions existing at the time visible emissions are present, any corrective action taken in response to the visible emissions, and the date corrective action was taken.

It should be noted that if a specific emission unit has a specific compliance demonstration method for visible emissions that differs from Facility-wide Condition A.8, then the specific compliance demonstration method overrides the requirement of Condition A.8. Condition A.8 is intended for small sources that would generally not have any visible emissions.

Facility-wide Condition A.8 requires the permittee to take corrective action as expeditiously as practicable. In general, the Department believes that taking corrective action within twenty-four hours of discovering visible emissions meets the intent of this requirement. However, it is understood that, depending on the circumstances, immediate action or a longer time period may be necessary.

4.2.8 Startup, Shutdown, Scheduled Maintenance, Safety Measures, Upset and Breakdown- IDAPA 58.01.01.130-136

4.2.8.(a) Requirement

Facility-wide Condition A.9 requires that the permittee comply with the requirements of IDAPA 58.01.01.130-136 for startup, shutdown, scheduled maintenance, safety measures, upset and breakdowns. This section is fairly self explanatory and no additional detail is necessary in this technical analysis. It should, however, be noted that subsections 133.02, 133.03, 134.04, and 134.05 are not specifically included in the permit as applicable requirements. These provisions of the *Rules* only apply if the permittee anticipates requesting consideration under subsection 131.02 of the *Rules* to allow the Department to determine if an enforcement action to impose penalties is warranted. Section 131.01 states "... The owner or operator of a facility or emissions unit generating excess emissions shall comply with Sections 131, 132, 133.01, 134.01, 134.02, 134.03, 135, and 136, as applicable. If the owner or operator anticipates requesting consideration under Subsection 131.02, then the owner or operator shall also comply with the applicable provisions of Subsections 133.02, 133.03, 134.04, and 134.05." Failure to prepare or file procedures pursuant to Sections 133.02 and 134.04 is not a violation of the *Rules* in and of itself, as stated in subsections 133.03.a and 134.06.b. Therefore, since the Permittee has the option to follow the procedures in Subsections 133.02, 133.03, 134.04, and 134.05; and is not compelled to, the subsections are not considered applicable requirements for the purpose of this permit and are not included as such.

4.2.8.(b) Compliance Demonstration

The compliance demonstration is contained within the text of Facility-wide Condition A.9. No further clarification is necessary here.

4.2.9 Chemical Accident Prevention Provisions - 40 CFR Part 68

4.2.9.(a) Requirement

Any facility that has more than a threshold quantity of a regulated substance in a process, as determined under 40 CFR 68.115 must comply with the requirements of the Chemical Accident Prevention Provisions at 40 CFR Part 68 no later than the latest of the following dates:

Three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR 68.130; or

The date on which a regulated substance is first present above a threshold quantity in a

4.2.10 Process Weight Rate Limit on Fiberglass Reinforced Plastic Process

Emissions from the fiberglass process are limited by process weight rate at IDAPA 58.01.01.702 by the following equation: Pound per hour limit = $0.045(PW) \exp 0.6$.

The applicant has certified that the facilities maximum process weight rate is 1,440 pounds per hour.

4.3 Applicable Requirements From Permit to Construct

All Permit to Construct limitations given below are for the Poly Resin Operation.

4.3.1 Styrene Emission Limits (Operating Permit Sections B.13 & B.14)

Styrene emissions are limited by the August 25, 1994 Permit. Emissions are limited to 18.1 pounds per hour and 54.4 tons per year. This requirement is incorporated into the Operating Permit. The short term pound per hour Operating Permit limit is a State only requirement because the basis for the short term limitations is solely for protection of the State's toxic air pollution standard. The ton per year limit is a federal applicable requirement, monitoring is required each month to demonstrate continuous compliance with the annual limit.

4.3.2 Volatile Organic Compound Emission Limit (Operating Permit Section B.9)

Volatile organic compound emissions (excluding styrene) are limited by the August 25, 1994 Permit. Emissions are limited to 0.65 pounds per hour and 1.69 tons per year. The hourly emission limit for VOC does not directly or indirectly demonstrate compliance with any federal or state applicable requirement. For this reason the hourly emission limitation of the Permit to Construct is not carried over to the Operating Permit. The annual VOC limit of 1.69 tons per year is carried over to the Operating Permit. An annual emission limit is sufficient because the standard, which is being protected, is an annual limit on VOC emissions to prevent the facility from emitting at major thresholds, which is an annual limit. Monitoring requirements are of a shorter duration than the limit. Monitoring is crafted, such that compliance or non-compliance can be demonstrated each month.

4.3.3 Particulate Matter Emissions (Operating Permit Section B.1)

Particulate matter emissions are limited by the August 25, 1994 Permit. Emissions are limited to 2.19 pounds per hour and 5.68 tons per year. This requirement is incorporated into the Operating Permit.

4.3.4 PM-10 emissions are limited by the August 25, 1994 Permit. Emissions are limited to 2.19 pounds per hour and 5.68 tons per year. This requirement is incorporated into the Operating Permit (the same limit as Particulate matter).

4.4 Operating Requirements From Permit to Construct

All of the following requirements from the existing Permit will be incorporated as applicable requirements into the Operating Permit:

4.4.1 The Permittee shall use polyester resins with a monomer content of no more than thirty-five percent (35%) by weight. This provision shall not apply to the use of gelcoat, resin used for mold construction, and corrosion-resistant resin.

- 4.4.2 Excluding the gelcoat and speciality resins, ninety percent (90%) by weight of all polyester resins, used by the Permittee, shall have a styrene monomer content of no more than thirty-five (35%) by weight.
- 4.4.3 The Permittee shall use a gelcoat with a styrene monomer content of no more than forty-three percent (43%) by weight.
- 4.4.4 The Permittee shall use a soap-based cleaner, ND-165 and acetone as the cleaning solvent. The amount of acetone is restricted to two (2) gallons per day.

There is a difference in the operating permit from the original form of regulating acetone emissions. The original form limited acetone usage to two gallons per day. The new form in the Tier I permit is now 600 pounds per month. This is a state only requirement. There is not a federal applicable requirement for acetone emission because acetone is not defined as a VOC and it is not on the list of HAPs, nor is it regulated anywhere in the federal regulations or approved Idaho State Implementation Plan. The operations permit does also include a State only requirement for monitoring the amount of acetone that is used each month.

- 4.4.5 Airless spray guns shall be used for all spray-up processes including gelcoat application.
- 4.4.6 Neither Stack No. 1 nor Stack No. 2 shall be equipped with a rain cap, or any other obstruction that would result in the downward deflection of the exhaust gas stream.
- 4.4.7 The Permittee shall at all times keep all exterior doors and/or windows for the building, used for fiber glassing operations, tightly closed except for the explicit purpose of moving necessary equipment, materials, or personnel into or out of the building.
- 4.4.8 The Permittee shall use closed containers for the disposal of all gelcoat, resin, catalyst, and cleaning materials in such a manner as to effectively control styrene and VOC emissions to the surrounding air.
- 4.4.9 The Permittee shall at no time allow containers of gelcoat, resin, catalyst or cleaning materials to be open to the atmosphere, other than to transfer material to or from the container or to insert a pump. This shall apply to full, partially full, and empty containers.
- 4.4.10 Resins, gelcoat, fiberglass, and catalyst are restricted to a maximum usage, as follows, in any calendar year, as per applicant's submittal:

Resins	720,000 pounds per year
Gelcoat	103,000 pounds per year
Fiberglass	400,000 pounds per year
Catalyst	17,500 pounds per year

The following requirement was not incorporated into the Operating Permit because it is not an applicable requirement which correlates to any standard, emission factor, or other operating or monitoring requirement:

- 4.4.11 Resins and gelcoat shall be stored out of direct sunlight.

4.5 Monitoring

Compliance assurance monitoring (CAM) requirements of 40 CFR 64 do not apply to this source because the source does not use a control device to limit emissions of the major source of air pollution (i.e. styrene emissions). This exemption from CAM is listed at 40 CFR 64.(a)(2).

4.5.1 Fuel Burning Equipment

The fuel burning equipment standard applies to the natural gas-fired make-up air heater. Since combustion of natural gas results in very little particulate matter emissions, no monitoring is required to assure compliance with this standard. To technically support that there is no need for monitoring to demonstrate compliance, a combustion evaluation is done on natural gas, and particulate matter emissions are estimated from combustion of natural gas, these exercises demonstrate compliance with the standard. This calculation was not done for this facility because my experience includes performing this calculation many times.

4.5.2 Fugitive Dust

The Permittee will be required to maintain a log of fugitive dust complaints. The Permittee will have the responsibility to assess the validity of the complaints, and take any corrective action necessary to reasonably control fugitive dust.

4.5.3 Visible Emissions (Operating Permit Section A.7)

The permittee shall conduct a quarterly facility wide visible emission inspection of potential point sources of visible emissions, during daylight hours and under normal operating conditions. Unless visible emissions are present, no formal Method 9 visible emissions observation is required. If any visible emissions are present from any point of emission the permittee shall take immediate corrective action to remedy the cause of the visible emissions. If the corrective action does not eliminate the visible emissions, then a Method 9 visible emission observation must be conducted. If opacity is greater than twenty percent (20%) for a period or periods aggregating more than three (3) minutes in any sixty (60) minute period the permittee shall take all necessary corrective action and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain a log of the results of each quarterly visible emission inspection. The log shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed) and any corrective action taken in response to the visible emissions.

4.5.4 Odors

The Permittee shall maintain a log of odor complaints received. The log shall, at a minimum, include the date that each complaint was received and a description of the following: the complaint, the Permittee's assessment of the validity of the complaint, and any corrective action taken.

4.5.5 Styrene

Provisions of determining compliance with the styrene limitation are included in the existing Permit to Construct. These existing methods of determining ongoing compliance are included in the Operating Permit. These requirements are:

The Permittee shall use polyester resins with a monomer content of no more than thirty-five percent (35%) by weight. This provision shall not apply to the use of gelcoat, resin used for mold construction, and corrosion-resistant resin.

Excluding the gelcoat and speciality resins, ninety percent (90%) by weight of all polyester resins, used by the Permittee, shall have a styrene monomer content of no more than thirty-five (35%) by weight.

The Permittee shall use a gelcoat with a styrene monomer content of no more than forty-three percent (43%) by weight.

The Permittee shall use closed containers for the disposal of all gelcoat, resin, catalyst, and cleaning materials in such a manner as to effectively control styrene and VOC emissions to the surrounding air.

The Permittee shall at no time allow containers of gelcoat, resin, catalyst, or cleaning materials to be open to the atmosphere, other than to transfer material to or from the container or to insert a pump. This shall apply to full, partially full, and empty containers.

Resins, gelcoat, fiberglass, and catalyst are restricted to a maximum usage as follows, in any calendar year, as per applicant's submittal:

Resins	720,000 pounds per year
Gelcoat	103,000 pounds per year
Fiberglass	400,000 pounds per year
Catalyst	17,500 pounds per year

These limitations are sufficient to determine ongoing compliance. The Permit to Construct also mandated a styrene source test to demonstrate compliance. This test was conducted and demonstrated, for permitting purposes, that the current operating, monitoring, and recordkeeping requirements are sufficient. The files do not indicate that DEQ has reviewed and approved this test as a formal compliance demonstration. The performance test was only approved for emission factor development for the issuance of the Permit. If this test is reviewed and approved by DEQ as a formal compliance demonstration, no further source testing is required. However, if this source test is not reviewed and approved by DEQ, the source test will be required to be conducted again to demonstrate compliance. This is the current existing requirement for source testing. This applicable requirement can be found in the August 25, 1994 letter, which transmitted to the source the most Current Permit to Construct (also dated August 25, 1994). In short, the source has fulfilled its requirement to conduct a styrene emission test and submit the results to Idaho DEQ.

4.5.6 VOC

The current Permit to Construct requirements, for determining compliance with the VOC emission limits, are not adequate to demonstrate ongoing compliance. The Operating Permit has been written to require the source to sum all of the VOCs used at the facility to demonstrate continuing compliance. The Permittee is required to sum emissions of VOCs (excluding styrene) each month; these monthly values then are added to demonstrate compliance with the annual emission limitation.

4.5.7 PM and PM-10

The Operating Permit will contain a requirement for the source to develop an operation and maintenance manual for the filters, which are used to control particulate matter. The source is required to conduct performance tests on stacks #1 and #2 to demonstrate compliance with particulate emission limits. The Permit also incorporates process weight rate limits. This regulation is found at IDAPA 58.01.01.702.

4.6 Recordkeeping

The Permittee is required to maintain sufficient recordkeeping to assure compliance with all of the terms and conditions of the Permit, as required by IDAPA 58.01.01.322.a and b. In addition, the Permittee shall retain records of all monitoring and other requirements in the Tier I OP for the most recent five (5) year period. These records shall be made available to DEQ representatives upon request.

4.7 Reporting

The Permittee shall comply with the following reporting requirements:

Sufficient reporting to assure compliance with all of the terms and conditions of the Permit. Reports for any required monitoring shall be submitted at least every six (6) months, in accordance with IDAPA 58.01.01.322.08.

In accordance with IDAPA 58.01.01.322.08, GEA must report all instances of deviations from permit requirements. Therefore, even if specific monitoring is not required by the Permit, the Permittee must report any deviations of which he/she is aware.

Excess emission reporting, as required to comply with the provisions of IDAPA 58.01.01.130 - 136.

4.8 Difference in Applicable Requirements from Original Form

Section B.3 of this Permit is a new applicable requirement. This new form is incorporated to assure compliance with applicable requirement B.1. Authority for this new term is found at IDAPA 58.01.01.322.01.

Section B.6 of this Permit is a new permit term, which is incorporated to assure compliance with applicable requirement B.1. Authority for this new term is found at IDAPA 58.01.01.322.01.

Section B.9 of this Permit is different from the original form. The pound per hour emission limit of the original requirement has been removed. The technical memorandum, which supports the issuance of this Permit, addresses this change.

Section B.10 of this Permit is incorporated into this Permit to assure compliance with Section B.8. Authority for this term is IDAPA 58.01.01.322.01.

Section B.12 of this Permit is incorporated into this Permit to assure compliance with Section B.10. Authority for this term is IDAPA 58.01.01.322.01.

Section B.21 of this Permit is incorporated into this Permit to assure compliance with Section B.20. Authority for this term is IDAPA 58.01.01.322.01.

[IDAPA 58.01.01.322.02, 5/1/94]

All references to calendar year have been changed to any consecutive 12 months per EPA directive.

5. ALTERNATIVE OPERATING SCENARIOS

No alternative operating scenarios were identified by the applicant.

6. TRADING SCENARIOS

There were no trading scenarios requested by the facility.

7. EXCESS EMISSIONS

GEA did not submit procedures to minimize excess emissions for possible excuses from penalties.

AIRS Point No. 020 SCC # 20300202 · Natural Gas Turbine

8. INSIGNIFICANT ACTIVITIES

Listed below are the insignificant activities described by the source and confirmed by DEQ to be insignificant activities, in accordance with IDAPA 58.01.01.317:

6,000 gallons Resin Storage Tank with vapor pressure less than 80 mmHg.

- Insignificant per: IDAPA 58.01.01.317.01.b.3 Operation, loading and unloading of volatile organic compound storage tanks, ten thousand (10,000) gallons capacity or less, with lids or other appropriate closure, vp not greater than eighty (80) mm Hg at twenty-one degrees C. Operation, loading and unloading of gasoline storage tanks, ten thousand (10,000) gallons capacity or less, with lids or other appropriate closure.

1 Propane Tank with 300-gallon capacity.

- Insignificant per: IDAPA 58.01.01.317.01.b.4 Operating, loading and unloading storage of butane, propane, or liquefied petroleum gas (LPG), storage tanks, vessel capacity under forty thousand (40,000) gallons.

9. COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION

9.1 Compliance Plan

GEA shall submit a compliance plan, indicating each emissions unit is in compliance, and will continue to comply with the terms and conditions of IDAPA 58.01.01.314.10. In addition, if there are additional terms or conditions applicable to the source, GEA will meet the terms and conditions on a timely basis, as required by DEQ. Furthermore, GEA will submit a compliance schedule, if the emissions unit is not in compliance.

9.2 Compliance Certification

GEA's application for this Permit contains a statement signed by their responsible official certifying they are in compliance with all applicable requirements.

GEA shall submit a periodic compliance certification for each applicable requirement in the form of annual report to DEQ and EPA within thirty (30) days after the end of each calendar year. The Permittee must certify compliance with all terms and conditions on the Permit.

9.3 Compliance Inspection

The facility may be inspected at least annually by DEQ. Copies of the annual inspection reports are located in the source file at the DEQ's office in Boise, Idaho.

10. REGISTRATION FEES

The emissions fees for the permitted sources will be determined according to IDAPA 58.01.01.525-538. The facility is in compliance registration fee requirements. The facility has paid fees for 61.7 tons of pollutants.

11. RECOMMENDATION

Based on the Tier I OP application and review of the federal regulations and state rules, staff recommends that DEQ issue a Tier I OP to GEA for their facility, located near Rathdrum, Idaho. The facility is a major facility because HAP emissions exceed 10 tons for any one pollutant. The facility is regulated by the Idaho's *Rules for the Control of Air Pollution in Idaho*.

DP:bm

G:\VHWP\ITMAN\OP\GEA\FINAL\GEA\FINAL.TM

Attachments

cc: Coeur d'Alene Regional Office
DEQ State Office